

DEPARTMENT OF TRANSPORTATION**DIVISION OF ENGINEERING SERVICES**

Office of Structural Materials

Quality Assurance and Source Inspection



Bay Area Branch
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Contract #: 04-0120F4Cty: SF/Ala Rte: 80 PM: 13.2/13.9File #: 69.28**WELDING INSPECTION REPORT****Resident Engineer:**Pursell, Gary**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-010783**Date Inspected:** 15-Nov-2009**Project Name:** SAS Superstructure**OSM Arrival Time:** 1900**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 700**Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **Location:** Shanghai, China**CWI Name:** See below**CWI Present:** Yes No**Inspected CWI report:** Yes No N/A**Rod Oven in Use:** Yes No N/A**Electrode to specification:** Yes No N/A**Weld Procedures Followed:** Yes No N/A**Qualified Welders:** Yes No N/A**Verified Joint Fit-up:** Yes No N/A**Approved Drawings:** Yes No N/A**Approved WPS:** Yes No N/A**Delayed / Cancelled:** Yes No N/A**Bridge No:** 34-0006**Component:** Tower Components**Summary of Items Observed:**

On this date Caltrans OSM Quality Assurance Inspector George Goulet was present during the times noted above for observations relative to the work being performed.

Bay 10

This QA Inspector randomly observed the following work in progress in Bay 10:

FCAW welding of weld joint SSD1-A544-A/B-2-81 located on PCMK south tower, skirt plate. Welder was identified as 054069. ZPMC QC was identified as CWI Li Ming (QC1). Assisting QC1 at this location and appearing to be monitoring the welding and recording data was ZPMC Sun Tan Liang, who was not a CWI. The welding variables recorded by QC1's assistant appeared to comply with WPS-B-T-2332-TC-P4-F. Also present at this location and appearing to be monitoring the welding operation was ABF Representative Kong Xian Hui.

SMAW welding of weld joint ED1-STSA3-2-109M-1-11A located on PCMK east tower, strut. Welder was identified as 040581. ZPMC QC was identified as QC1. Assisting QC1 at this location and appearing to be monitoring the welding and recording data was ZPMC Sun Tan Liang, who was not a CWI. The welding variables recorded by QC1's assistant appeared to comply with WPS-B-T-2312-TC-U3b-1.

SMAW welding of weld joint ED1-STSA3-2-109M-1-61B located on PCMK east tower, strut. Welder was identified as 057220. ZPMC QC was identified as QC1. Assisting QC1 at this location and appearing to be monitoring the welding and recording data was ZPMC Sun Tan Liang, who was not a CWI. The welding variables recorded by QC1's assistant appeared to comply with WPS-B-T-2312-TC-U3b-1.

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SMAW welding of weld joint ED1-STSA3-2-89M-2-64B located on PCMK east tower, strut. Welder was identified as 040582. ZPMC QC was identified as QC1. Assisting QC1 at this location and appearing to be monitoring the welding and recording data was ZPMC Sun Tan Liang, who was not a CWI. The welding variables recorded by QC1's assistant appeared to comply with WPS-B-T-2312-TC-U3b-1.

SMAW welding of weld joint ED1-STSA3-2-89M-2-10A located on PCMK east tower, strut. Welder was identified as 040582. ZPMC QC was identified as QC1. Assisting QC1 at this location and appearing to be monitoring the welding and recording data was ZPMC Sun Tan Liang, who was not a CWI. The welding variables recorded by QC1's assistant appeared to comply with WPS-B-T-2312-TC-U3b-1.

FCAW welding of weld joint SSD1-SPSA4-20-2A located on PCMK south tower, lift 4, internal splice plate. Welder was identified as 053870. ZPMC QC was identified as QC1. The welding variables recorded by QC appeared to comply with WPS-B-T-2231-TC-U5-F. Also present at this location and appearing to be monitoring the welding operation was ABF Representative Yang Ye Heng.

FCAW welding of weld joint NSD1-SPSA4-15-2A located on PCMK north tower, lift 4, internal splice plate. Welder was identified as 050041. ZPMC QC was identified as QC1. The welding variables recorded by QC appeared to comply with WPS-B-T-2232-B-U5-F. Also present at this location and appearing to be monitoring the welding operation was ABF Representative Yang Ye Heng.

FCAW welding of weld joint SSD1-SPSA4-16-2B located on PCMK south tower, lift 4, internal splice plate. Welder was identified as 040261. ZPMC QC was identified as CWI Du Zhi Qun (QC2). The welding variables recorded by QC2 appeared to comply with WPS-B-T-2232-B-U5-F.

SMAW welding of temporary upper rotation fender located on PCMK north tower, lift 4, skin D, between approximately 136M and 138M elevations. Welder was identified as 040475. ZPMC QC was identified as QC2. Assisting QC2 at this location and appearing to be monitoring the welding and recording data was ZPMC Li Peng Fei, who was not a CWI. The welding variables recorded by QC2's assistant appeared to comply with WPS-B-P-2114.

SAW welding of weld joint SSTL4-1B/L-3A located outside PCMK south tower, lift 4, skin A to skin E, between approximately 115M and 120M elevations. Welder was identified as 201750. ZPMC QC was identified as QC2. The welding variables recorded by QC2 appeared to comply with WPS-B- T-2221-C-U2b-S-2. Also present at this location and appearing to be monitoring the welding operation was ABF Representative Li Nan.

SAW welding of weld joint SSTL4-1B/L-3A located outside PCMK south tower, lift 4, skin A to skin E, between approximately 122M and 129M elevations. Welder was identified as 051413. ZPMC QC was identified as QC2. The welding variables recorded by QC2 appeared to comply with WPS-B- T-2221-C-U2b-S-2. Also present at this location and appearing to be monitoring the welding operation was ABF Representative Li Nan.

SAW welding of weld joint SSTL4-1B/L-3A located outside PCMK south tower, lift 4, skin A to skin E, between approximately 129M and 136M elevations. Welder was identified as 0503060. ZPMC QC was identified as QC2. The welding variables recorded by QC2 appeared to comply with WPS-B- T-2221-C-U2b-S-2. Also present at

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this location and appearing to be monitoring the welding operation was ABF Representative Li Nan.

SAW welding of weld joint SSTL4-1B/L-3A located outside PCMK south tower, lift 4, skin A to skin E, between approximately 138M and 144M elevations. Welder was identified as 040242. ZPMC QC was identified as QC2. The welding variables recorded by QC2 appeared to comply with WPS-B- T-2221-C-U2b-S-2. Also present at this location and appearing to be monitoring the welding operation was ABF Representative Li Nan.

SMAW welding of temporary upper rotation fender located on PCMK north tower, lift 4, skin E (75mm thickness), between approximately 120.5M and 121.5M elevations. Welder was identified as 040491. ZPMC QC was identified as QC2. Assisting QC2 at this location and appearing to be monitoring the welding and recording data was ZPMC QC Li Peng Fei, who was not a CWI. The welding variables recorded by QC2's assistant appeared to comply with WPS-B-P-2114. However, this QA Inspector observed the welding occurring without sufficient base material preheat. This QA Inspector used a 110 degree Celsius Tempilstik temperature indicator mark applied to the adjacent base material within approximately 30mm from the point of welding and observed it did not melt. This QA Inspector notified QC2 and ZPMC QC Li Peng Fei that the insufficient base material preheat temperature was not in compliance with WPS-B-P-2114. This QA Inspector generated an incident report for this date concerning the above noted issue and notified QC2 and ABF Representative Li Nan of same.

Bay 11

This QA Inspector randomly observed the following work in progress in Bay 11:

SAW welding of weld joint ESTL4-2B/L-58A located outside PCMK east tower, lift 4, skin B to skin C, between approximately 122M and 127M elevations. Welder was identified as 056975. ZPMC QC was identified as CWI Guo Peng (QC3). The welding variables recorded by QC3 appeared to comply with WPS-B-T-2221-C-U2b-S-2. Also present at this location and appearing to be monitoring the welding operation was ABF Representative Zhang Xiong.

SAW welding of weld joint ESTL4-2B/L-58A located outside PCMK east tower, lift 4, skin B to skin C, between approximately 127M and 131M elevations. Welder was identified as 044560. ZPMC QC was identified as QC3. The welding variables recorded by QC3 appeared to comply with WPS-B-T-2221-C-U2b-S-2. Also present at this location and appearing to be monitoring the welding operation was ABF Representative Zhang Xiong.

SAW welding of weld joint ESTL4-2B/L-58A located outside PCMK east tower, lift 4, skin B to skin C, between approximately 131M and 136M elevations. Welder was identified as 041716. ZPMC QC was identified as QC3. The welding variables recorded by QC3 appeared to comply with WPS-B-T-2221-C-U2b-S-2. Also present at this location and appearing to be monitoring the welding operation was ABF Representative Zhang Xiong.

Unless otherwise noted, all work observed on this date appeared to generally comply with applicable contract documents.

Summary of Conversations:

As noted above.

Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or

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remedial efforts please contact Serge Sinevod, 134-8257-0045, who represents the Office of Structural Materials for your project.

Inspected By:	Goulet, George	Quality Assurance Inspector
Reviewed By:	Dawson, Paul	QA Reviewer
